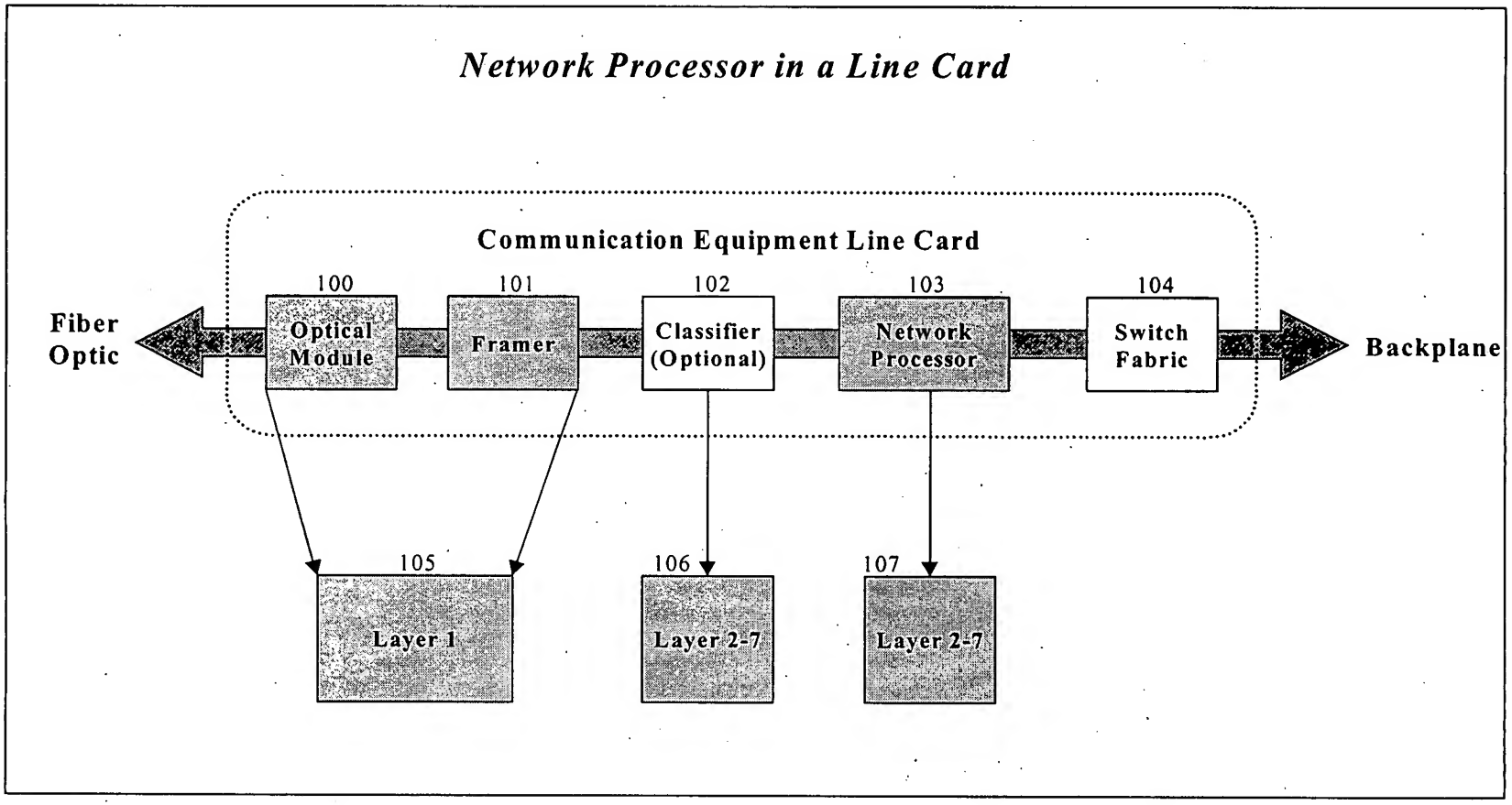
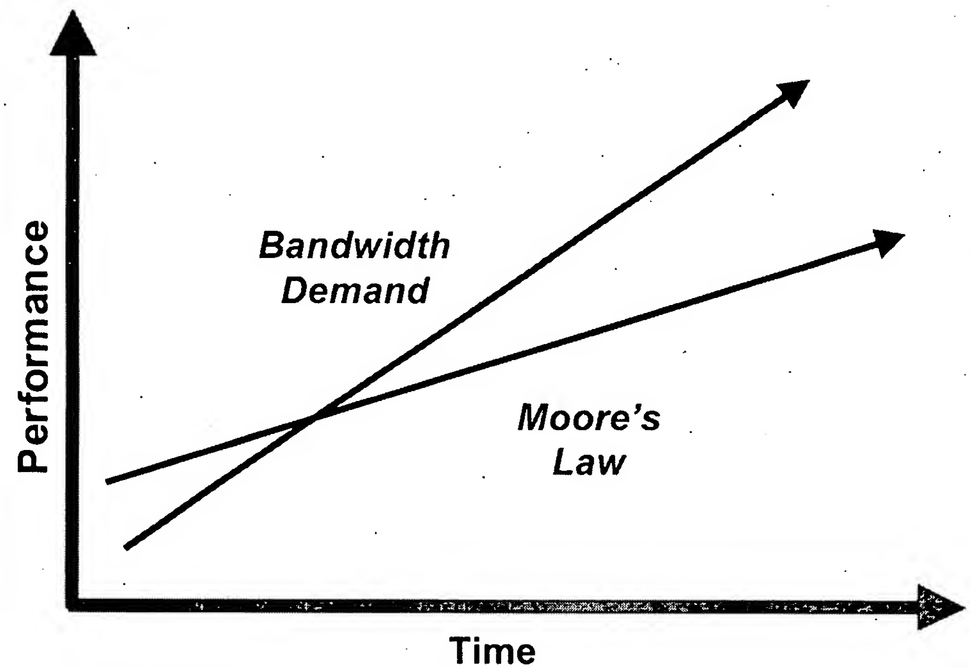

Network Processor in a Line Card
Communication Equipment Line Card
Fiber Optic
100
Optical Module
101
Framer
102
Classifier (Optional)
103
Network Processor
104
Switch Fabric
Backplane
105
Layer 1
106
Layer 2-7
107
Layer 2-7

Figure 1

10035571.102300

Moore's Law Vs Bandwidth Demand



- Moore's Law
  - •100% every 18 Months
- Fiber Capacity
  - •100% every 10 to 12 Months
- Internet Core bps
  - •100% every 4 to 6 Months

Figure 2

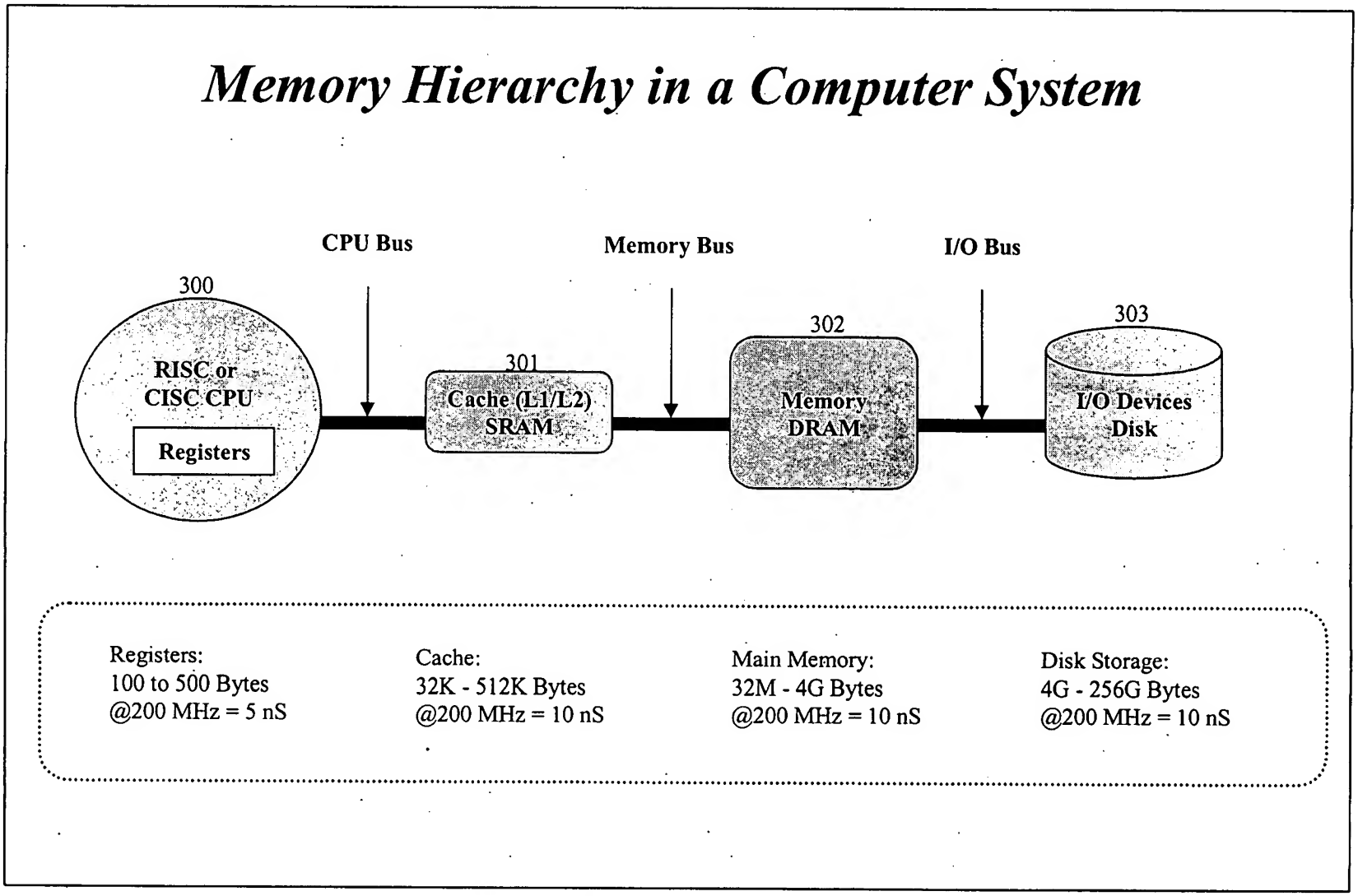


Figure 3

10035541-102600

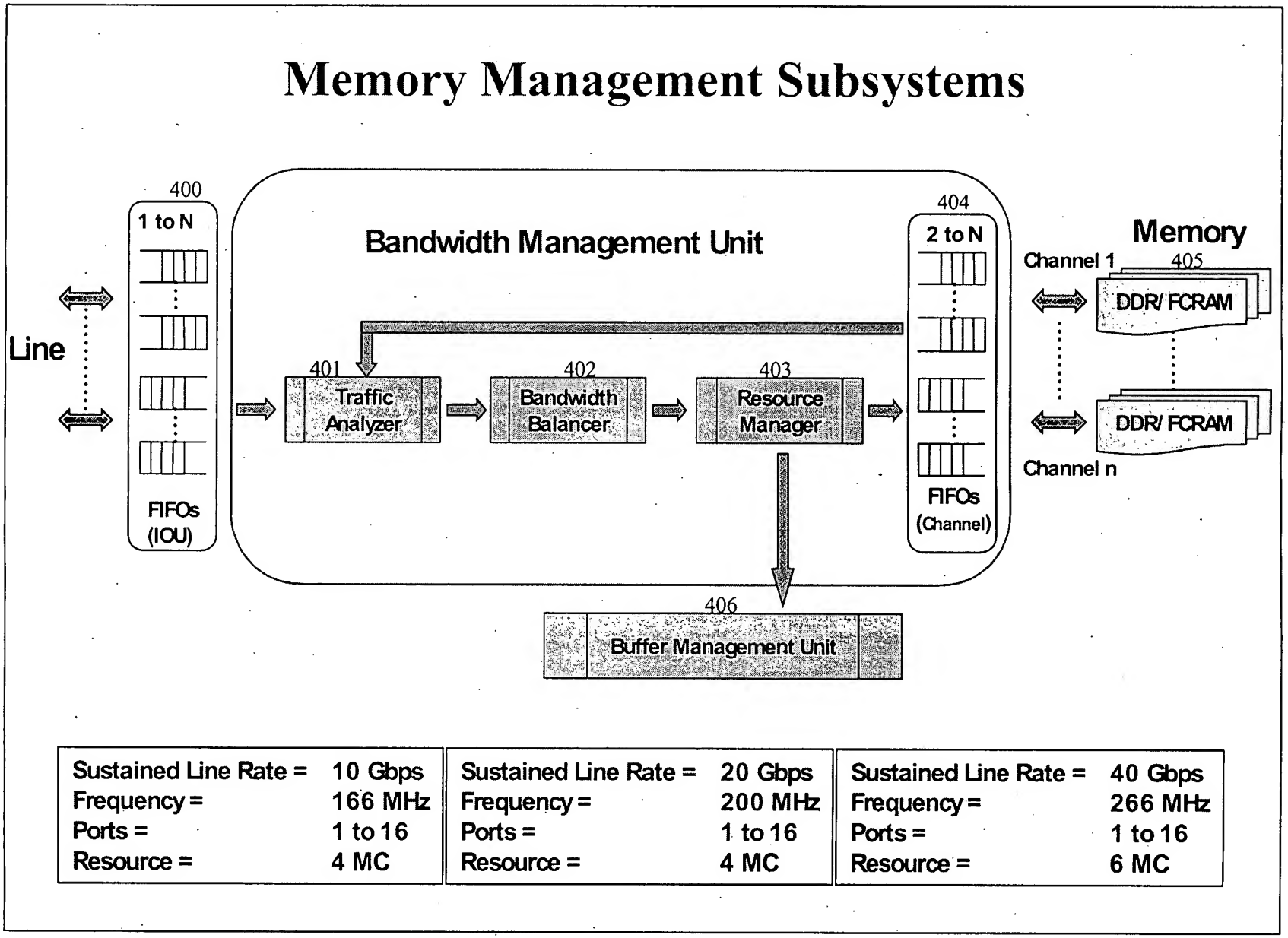


Figure 4

10035571.102300

Bandwidth Balancer Data Structure

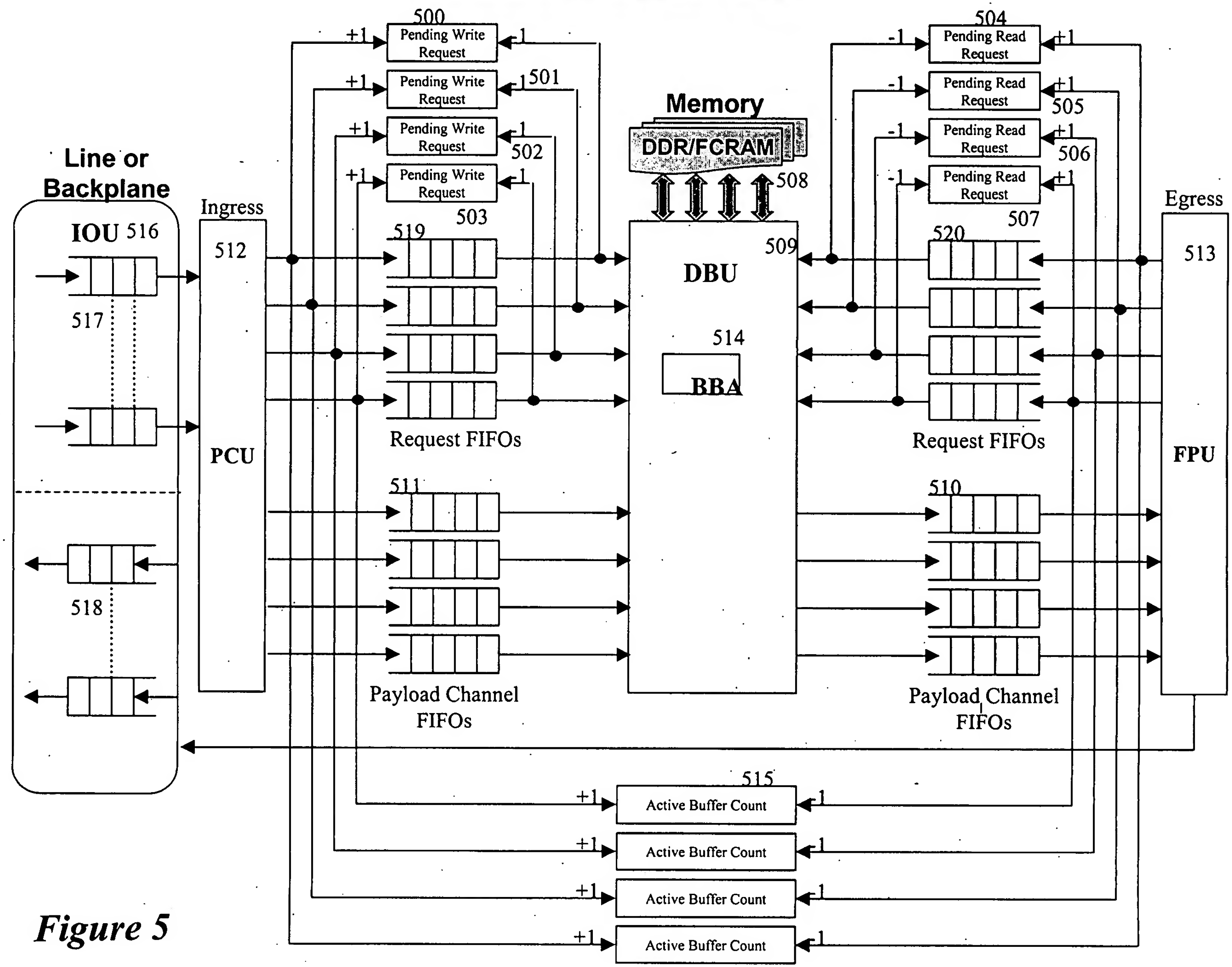


Figure 5

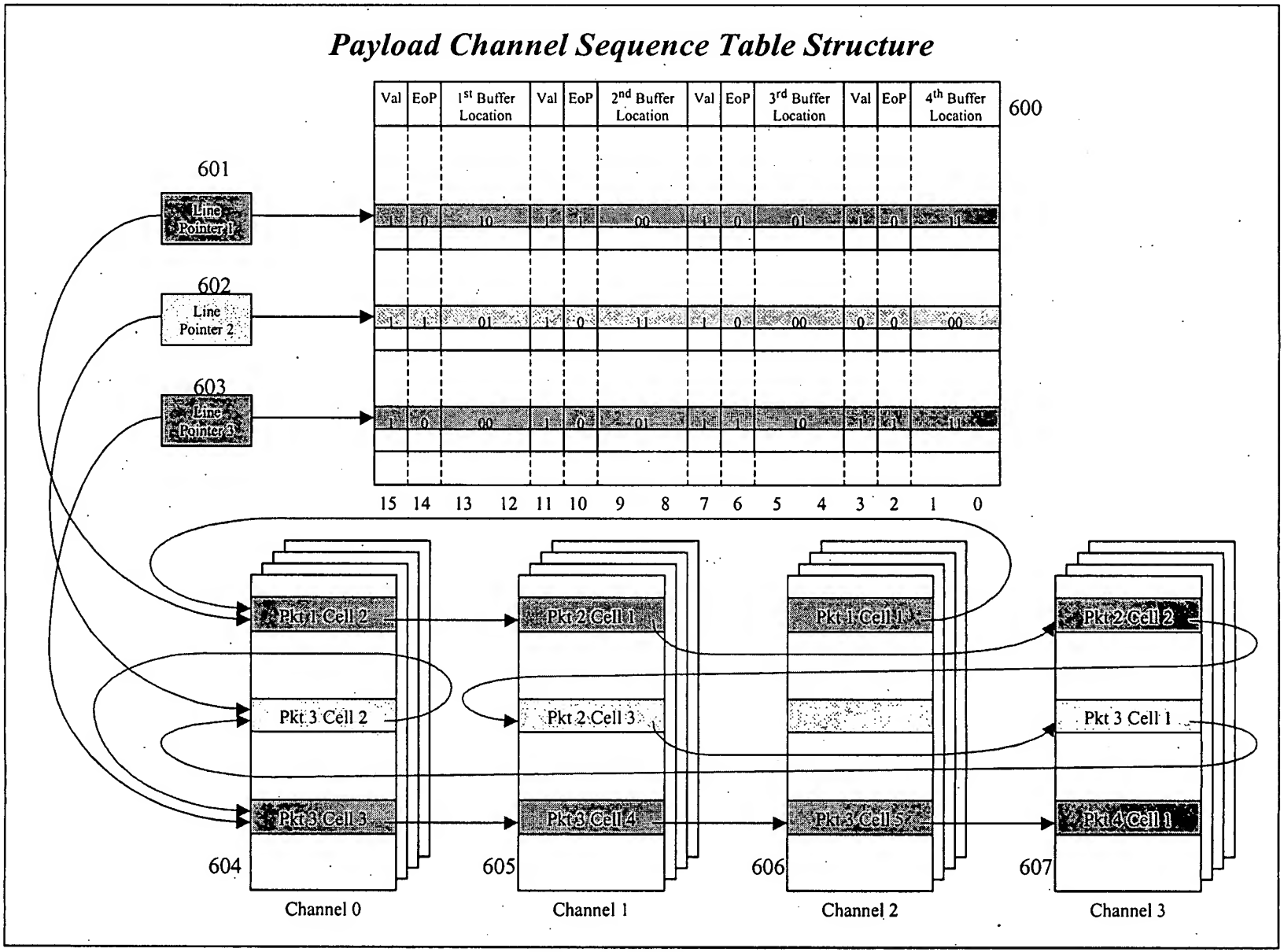

Payload Channel Sequence Table Structure
Val
EoP
1st Buffer Location
2nd Buffer Location
3rd Buffer Location
4th Buffer Location
600
601
602
603
Line Pointer 1
Line Pointer 2
Line Pointer 3
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Pkt 1 Cell 2
Pkt 3 Cell 2
Pkt 3 Cell 3
Pkt 2 Cell 1
Pkt 2 Cell 3
Pkt 3 Cell 4
Pkt 1 Cell 1
Pkt 3 Cell 5
Pkt 2 Cell 2
Pkt 3 Cell 1
Pkt 4 Cell 1
604
605
606
607
Channel 0
Channel 1
Channel 2
Channel 3

Figure 6

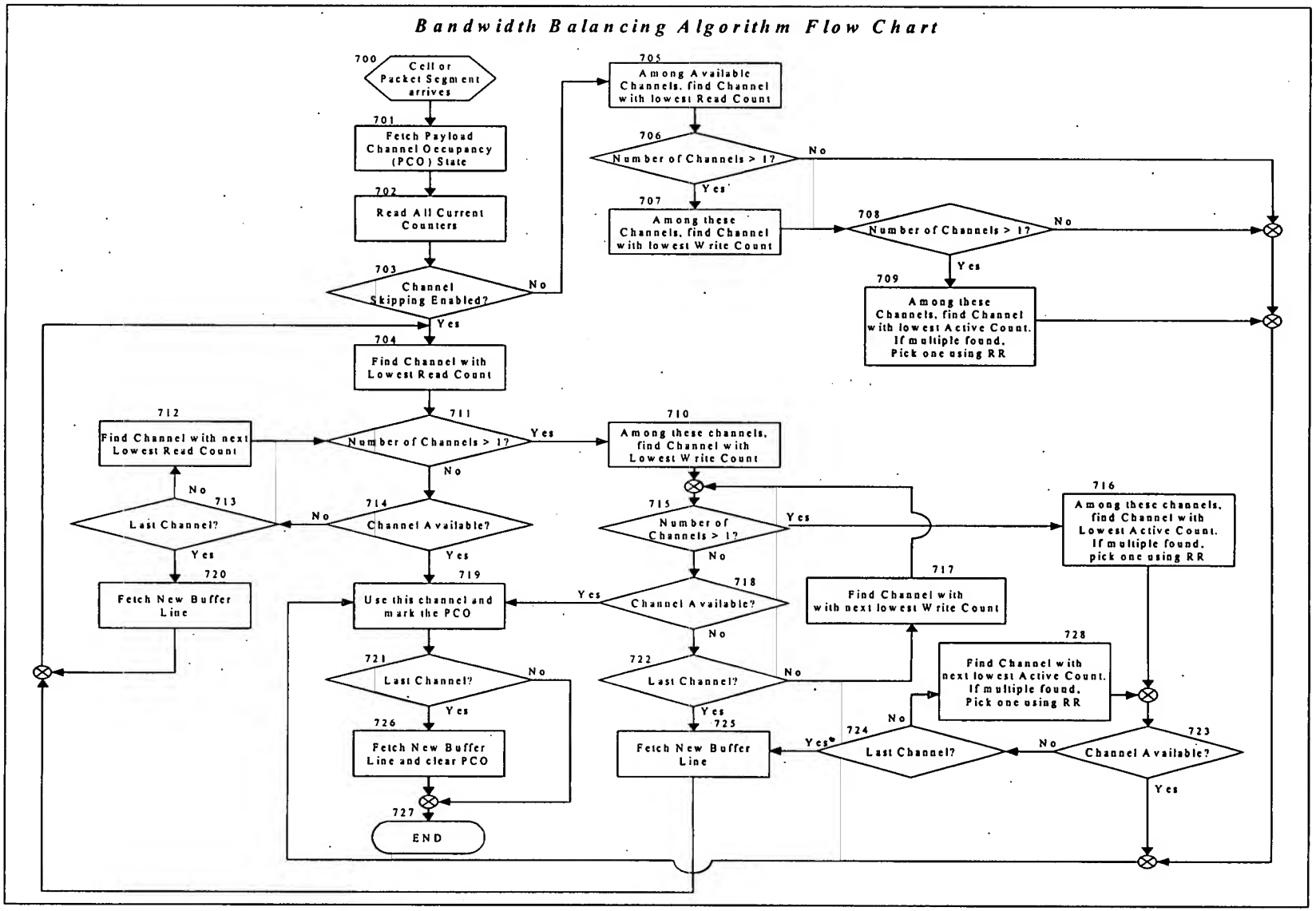


Figure 7

10035571.e10230